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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/975,944 | 10/15/2001 | Sudhakar Shenoy | CSCO-012/4912 | 9609 |

26392 7590 07/26/2005

NARENDRA R. THAPPETA
LANDON & STARK ASSOCIATES, ONE CRYSTAL PARK
SUITE 210, 2011 CRYSTAL DRIVE
ARLINGTON, VA 22202

| EXAMINER | |
|---|---|
| WILSON, ROBERT W | |
| **ART UNIT** | **PAPER NUMBER** |
| 2661 | |

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/975,944 | SHENOY ET AL. | |
| | Examiner | Art Unit | |
| | Robert W. Wilson | 2661 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 October 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/7/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

*Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-23 & 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davie (U.S. Patent No.: 6,320,845) in view of Irish (U.S. Patent No.: 6,757,281 B1) further in view of Rochberger (U.S. Patent No.: 6,577,653 B1).

Referring to claim 1, Davie teaches: A method of forwarding IP or layer 3 datagrams from a , Router 25 per Fig 1 (First edge Router) over an ATM or layer 2 network to Router 27 (2nd edge router) per Fig 1 and col. 2 lines 31-44. The reference teaches that a plurality of IP datagrams are received by router (25) (First edge router) per Fig 1 and col. 2 lines 31-44 (receiving).

Davie does not expressly call for:

provisioning said first edge router a plurality of virtual circuits on said layer-2 network , said plurality of virtual circuits being associated with a layer-3 route;

determining in said first edge router a subset of layer-3 datagrams, with each datagram having a corresponding layer-3 route, wherein said subset of layer-3 datagrams are comprised in said plulality of layer-3 datagrams;

encapsulating each of said subset of layer-3 datagrams in a corresponding plurality of layer-2 packets, some of said subset of layer-3 datagrams being encapsulated for sending on a first one of said plurality of virtual circuits and some other of said subset of layer-3 datagrams being encapsulated for transmission on another one of said plurality of virtual circuits, and

sending said plurality of layer-2 packets related to said subset of layer-3 datagrams on said layer-2 network according to said encapsulating but teaches sending IP datagrams in ATM layer 2 packets per fig 1.

Irish teaches: provisioning a single VC on a layer 2 network in order to carry IP or layer 3 traffic based upon a layer 3 destination address per col. 1 line 14-col. 2 line 63 (provisioning). Determining which datagram from a plurality of data grams will be routed over an IP route based upon destination address per col. 1 line 14-col. 2 line 63 (determining). Encapsulating IP or layer

3 datagrams into ATM layer 2 packets based upon IP destination address which is translated to a layer 2 virtual circuit per col. 1 line 14-col. 2 line 63 (encapsulating). Sending a plurality of layer 2 packets related to said subset of layer 3 datagrams which have been encapsulated in the layer 2 packets per col. 1 line 14-col. 2 line 63 (sending)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the processing of Irish in order to build a network with standard compliant processing.

The combination of Davis and Irish do not expressly call for: sending a layer 3 datagram which has been encapsulated into layer 2 packet in plurality of VCs but teaches sending layer 3 packets which have been encapsulated in a layer 2 packet in a single VC.

Rochberger teaches: sending a layer 2 packet in a plurality of VCs per col. 6 line 55-col. 7 line 59.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the processing of Rochberger to the router or Davie an Irish in order to route high bandwidth calls which might not otherwise be routed per col. 7 lines 10-16 of Rochberger which results in load balancing the traffic over the network.

In addition the combination teaches:

Referring to claim 2, the combination of Davie, Irish, & Rochberger teaches the method of claim 1.

The combination of Davie, Irish and Rochberger do not expressly call for: wherein said determining comprises using a destination address comprising in each of said layer-3 datagrams to determine sad corresponding layer-3 router.

Irish teaches: ARP is utilized to determine the layer-2 address based upon the IP destination address per col. 1 line 14-col. 2 line 63.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ARP or Irish the processing of the combination of Davie, Irish, and Rochberger in order to build an edge router which can determine routing over the ATM network.

Referring to claim 3, the combination of Davie, Irish, & Rochberger teaches the method of claim 2.

The combination of Davie, Irish and Rochberger do not expressly call for: wherein said layer-2 network comprises a plurality of switches providing a plurality of physical paths between a first edge router and said second edge rout, said first one of said plurality of virtual circuits being provided on a first one of said plurality of physical paths and a second one of said plurality of virtual circuits being provided on a second one of said plurality of physical paths.

Rochberger teaches: wherein said layer-2 network comprises a plurality of switches providing a plurality of physical paths between a first edge router and said second edge rout, said first one of said plurality of virtual circuits being provided on a first one of said plurality of physical paths and a second one of said plurality of virtual circuits being provided on a second one of said plurality of physical paths per Fig 1 & Fig 4

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the parallel virtual circuit paths of Rochberger to the processing of the combination of Davie, Irish, and Rochberger in order to build an edge router in order which can route calls which might not otherwise be routed per col. 7 lines 10-16 of Rochberger which results in load balancing the traffic over the network.

Referring to claim 4, the combination of Davie, Irish, & Rochberger teaches the method of claim 2.

The combination of Davie, Irish and Rochberger do not expressly call for: further comprising selecing one of said plurality of virtual circuits for transmitting each of said subset of layer-3 datagrams, wherein said encapsulating is performed after selecting.

Irish teaches: ARP is utilized to determine the layer-2 address based upon the IP destination address which is performed before encapsulating per col. 1 line 14-col. 2 line 63 or further comprising selecing one of said plurality of virtual circuits for transmitting each of said subset of layer-3 datagrams, wherein said encapsulating is performed after selecting.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ARP or Irish the processing of the combination of Davie, Irish, and Rochberger in order to build an edge router which can determine routing over the ATM network.

Referring to claim 5, the combination of Davie, Irish, & Rochberger teaches the method of claim 4.

The combination of Davie, Irish and Rochberger do not expressly call for: wherein said determining comprises retrieving a route entry from a forwarding table using said destination address of a first IP datagram, wherein said route entry indicates whether said IP route is to be used to transport said first Ip datagram, and wherein said selecting is performed based on said route entry.

Irish teaches: ARP table or forwarding table uses IP destination address to determine forwarding path per col. 1 line 14-col. 2 line 63 or wherein said determining comprises retrieving a route entry from a forwarding table using said destination address of a first IP datagram, wherein said route entry indicates whether said IP route is to be used to transport said first Ip datagram, and wherein said selecting is performed based on said route entry.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ARP or Irish the processing of the combination of Davie, Irish, and Rochberger in order to build an edge router which can determine routing over the ATM network.

Referring to claim 6, the combination of Davie, Irish, & Rochberger teaches the method of claim 5.

The combination of Davie, Irish and Rochberger do not expressly call for: wherein said determining is implemented in the form of a process under the control of a scheduler, wherein said process and said scheduler are implemented substantially in the form of software in said first edge router.

Irish teaches: ARP function or schedule is substantially a software process which is in the edge router which controls the process of assigning a route or scheduler per col. 1 line 14-col. 2 line 63 or wherein said determining is implemented in the form of a process under the control of a scheduler, wherein said process and said scheduler are implemented substantially in the form of software in said first edge router.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ARP or Irish the processing of the combination of Davie, Irish, and Rochberger in order to build an edge router which can determine routing over the ATM network.

Referring to claim 7, the combination of Davie, Irish, & Rochberger teaches the method of claim 4.

The combination of Davie, Irish and Rochberger do not expressly call for: wherein said determining and selecting are implemented using a data structure, which when traversed using said destination address returns a layer-2 header corresponding to a virtual circuit on which a corresponding IP datagram is to be sent.

Irish teaches: the ARP function has inherent table or data structure which is utilized to determine the destination address of the layer 2 header based upon the IP destination address per col. 1 line 14-col. 2 line 63 or wherein said determining and selecting are implemented using a data structure, which when traversed using said destination address returns a layer-2 header corresponding to a virtual circuit on which a corresponding IP datagram is to be sent.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ARP or Irish the processing of the combination of Davie, Irish, and Rochberger in order to build an edge router which can determine routing over the ATM network.

Referring to claim 8, the combination of Davie, Irish, & Rochberger teaches the method of claim 7.

The combination of Davie, Irish and Rochberger do not expressly call for: wherein said determining and said selecting are implemented in an interrupt handler and wherein said data structure comprises a tree.

Irish teaches: execution of the ARP function is required which an inherent interruption of the packet routing process in order to search the route table which is in a structure that the examiner interprets as a tree of routes per col. 1 line 14-col. 2 line 63 or determining and said selecting are implemented in an interrupt handler and wherein said data structure comprises a tree

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ARP or Irish the processing of the combination of Davie, Irish, and Rochberger in order to build an edge router which can determine routing over the ATM network.

Referring to claim 9, the combination of Davie, Irish, & Rochberger teaches the method of claim 2.

The combination of Davie, Irish and Rochberger do not expressly call for: wherein layer-3 comprises Internet Protocol (IP) such that layer-3 datagrams, layer-3 protocol and layer-3 route respectively comprise IP datagram, IP protocol, and IP route, and wherein said layer-2 comprises asynchronous transfer mode (ATM) such that said layer-2 packets comprises ATM cells

Irish teaches: IP layer 3 data grams are routed over layer 2 ATM per col. 1 line 14-col. 2 line 63 or wherein layer-3 comprises Internet Protocol (IP) such that layer-3 datagrams, layer-3 protocol and layer-3 route respectively comprise IP datagram, IP protocol, and IP route, and wherein said layer-2 comprises asynchronous transfer mode (ATM) such that said layer-2 packets comprises ATM cells

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ARP or Irish the processing of the combination of Davie, Irish, and Rochberger in order to build an edge router which can determine routing over the ATM network.

Referring to claim 28, the combination of Davie, Irish, & Rochberger teaches the method of claim 2.

The combination of Davie, Irish and Rochberger do not expressly call for: wherein layer-3 comprises Internet Protocol (IP) such that layer-3 datagrams, layer-3 protocol and layer-3 route respectively comprise IP datagram, IP protocol, and IP route, and wherein said layer-2 comprises asynchronous transfer mode (ATM) such that said layer-2 packets comprises ATM cells

Irish teaches: IP layer 3 data grams are routed over layer 2 ATM per col. 1 line 14-col. 2 line 63 or wherein layer-3 comprises Internet Protocol (IP) such that layer-3 datagrams, layer-3 protocol and layer-3 route respectively comprise IP datagram, IP protocol, and IP route, and wherein said layer-2 comprises asynchronous transfer mode (ATM) such that said layer-2 packets comprises ATM cells

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ARP or Irish the processing of the combination of Davie, Irish, and Rochberger in order to build an edge router which can determine routing over the ATM network.

Referring to claim 10, it is within the level of one skilled in the art at the time of the invention to implement the method claim 1 in instructions. It would have been obvious to store the instructions on a computer readable medium so that they would be executable on a processor.

Referring to claim 11, it is within the level of one skilled in the art at the time of the invention to implement the method claim 2 in instructions. It would have been obvious to store the instructions on a computer readable medium so that they would be executable on a processor.

Referring to claim 12, it is within the level of one skilled in the art at the time of the invention to implement the method claim 3 in instructions. It would have been obvious to store the instructions on a computer readable medium so that they would be executable on a processor.

Referring to claim 13, it is within the level of one skilled in the art at the time of the invention to implement the method claim 4 in instructions. It would have been obvious to store the instructions on a computer readable medium so that they would be executable on a processor.

Referring to claim 14, it is within the level of one skilled in the art at the time of the invention to implement the method claim 5 in instructions. It would have been obvious to store the instructions on a computer readable medium so that they would be executable on a processor.

Referring to claim 15, it is within the level of one skilled in the art at the time of the invention to implement the method claim 6 in instructions. It would have been obvious to store the instructions on a computer readable medium so that they would be executable on a processor.

Referring to claim 16, it is within the level of one skilled in the art at the time of the invention to implement the method claim 7 in instructions. It would have been obvious to store the instructions on a computer readable medium so that they would be executable on a processor.

Referring to claim 17, it is within the level of one skilled in the art at the time of the invention to implement the method claim 8 in instructions. It would have been obvious to store the instructions on a computer readable medium so that they would be executable on a processor.

Referring to claim 18, it is within the level of one skilled in the art at the time of the invention to implement the method claim 1 in logic or means.

Referring to claim 19, it is within the level of one skilled in the art at the time of the invention to implement the method claim 2 in logic or means

Referring to claim 20, it is within the level of one skilled in the art at the time of the invention to implement the method claim 4 in logic or means

Referring to claim 21, it is within the level of one skilled in the art at the time of the invention to implement the method claim 51 in logic or means

Referring to claim 22, it is within the level of one skilled in the art at the time of the invention to implement the method claim 7 in logic or means

Referring to claim 23, Davie teaches: Router 25 per Fig 1 (First edge Router) which has an inbound interface for receiving IP or layer 3 data grams and has an output interface which sends out ATM or layer 2 packets over an ATM or layer 2 network to Router 27 ($2^{nd}$ edge router) per Fig 1 and col. 2 lines 31-44.

Davie does not expressly call for: a memory storing data indicating that a plurality of virtual circuits are provisioned to said second edge router on said layer-2 network, said data further indicating that said plurality of virtual circuits are associated with a layer-3 route or a virtual circuit (VC) determination block determining to send some of said subset of layer-3 datagrams on a first one of said plurality of virtual circuits and some other of said subset of layer-3 datagrams on another one of said plurality of virtual circuits; and an outbound interface sending each of said subset of alyer-3 data grams on a determined one of said plurality of virtual circuits in the form of a plurality of layer-2 packets on said layer-2 network.

Irish teaches: provisioning of a single layer 2 route or virtual circuit based upon a layer 3 datagram per col. 1 line 14-col. 2 line 63.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the provisioning of a single VC based upon a layer 3 datagram route in order to be standards compliant.

The combination of Davie and Irish do not expressly call for: a memory storing data indicating that a plurality of virtual circuits are provisioned to said second edge router on said layer-2 network, said data further indicating that said plurality of virtual circuits are associated with a layer-3 route or a virtual circuit (VC) determination block determining to send some of said subset of layer-3 datagrams on a first one of said plurality of virtual circuits and some other of said subset of layer-3 datagrams on another one of said plurality of virtual circuits; and an outbound interface sending each of said subset of alyer-3 data grams on a determined one of said plurality of virtual circuits in the form of a plurality of layer-2 packets on said layer-2 network.

Rochhberg teaches: topology database which is inherently is stored in memory which indicates whether VCs have been assigned per col. 10 line 4-col. 11 line 42 (memory for storing);

and 92 per Fig 4 or virtual circuit determining block or per col. 12 line 47-col. 13 line 17 (Virtual determining block)

and 92 per Fig 4 has an outbound interface for determining which layer 2 packets containing layer 3 encapsulated packets are sent over the plurality of VCs.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the database with inherent memory and determining block of Rochberg to the edge router of the combination of Davie and Irish in order to balance the load over the network.

3. Claims 24-25, 27, & 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davie (U.S. Patent No.: 6,320,845) in view of Irish (U.S. Patent No.: 6,757,281 B1) in view of Rochberger (U.S. Patent No.: 6,577,653 B1) further in view of Chase (U.S. Patent No.: 6,081,524).

Referring to claim 24, the combination of Davie, Irish, & Rochberger teaches the first edge router of claim 23,

The combination of Davie, Irish and Rochberger do not expressly call for: segmentation block of segmenting each of said subset of layer-3 datagrams into plurality of payloads, and an encapsulator encapsulating said plurality of payloads in corresponding plurality of layer-2 packets, wherein said plurality of layer-2 packet corresponding to each layer-3 datagram are encapsulated according to the determination of said VC determination block

Chase teaches: segmentation of layer –3 datagrams into a plurality of payloads as well as encapsulating the datagrams into layer 2 and determination of DLCI or virtual circuit per Fig 3 or col. 1 line 39-co. 2 line 31.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the processing of Chase the router of the combination of Davie, Irish, and Rochberger in order to build a router which sends layer 3 packets over an ATM network. It is within the level of one skilled in the art to implemtn the segmentation and encapsulation functions as logic blocks or segmentation block and encapsulator.

Referring to claim 25, the combination of Davie, Irish, Rochberger, and Chase teaches the method of claim 24.

The combination of Davie, Irish, Rochberger, and Chase do not expressly call for: wherein said layer-2 network comprises a plurality of switches providing a plurality of physical paths between a first edge router and said second edge rout, said first one of said plurality of virtual circuits

being provided on a first one of said plurality of physical paths and a second one of said plurality of virtual circuits being provided on a second one of said plurality of physical paths.

Rochberger teaches: wherein said layer-2 network comprises a plurality of switches providing a plurality of physical paths between a first edge router and said second edge rout, said first one of said plurality of virtual circuits being provided on a first one of said plurality of physical paths and a second one of said plurality of virtual circuits being provided on a second one of said plurality of physical paths per Fig 1 & Fig 4

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the parallel virtual circuit paths of Rochberger to the processing of the combination of Davie, Irish, Rochberger, and Davie in order to build an edge router in order which can route calls which might not otherwise be routed per col. 7 lines 10-16 of Rochberger which results in load balancing the traffic over the network.

Referring to claim 27, the combination of Davie, Irish, Rochberger, and Chase teaches the method of claim 24.

The combination of Davie, Irish, Rochberger, and Chase do not expressly call for: further comprising a data structure, which when traversed using said destination address returns a layer-2 header corresponding to a virtual circuit on which a corresponding IP datagram is to be sent

Irish teaches: the ARP function has inherent table or data structure which is utilized to determine the destination address of the layer 2 header based upon the IP destination address per col. 1 line 14-col. 2 line 63 or wherein said determining and selecting are implemented using a data structure, which when traversed using said destination address returns a layer-2 header corresponding to a virtual circuit on which a corresponding IP datagram is to be sent.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ARP or Irish the processing of the combination of Davie, Irish, Rochberger, and Chase in order to build an edge router which can determine routing over the ATM network.

Referring to claim 29, the combination of Davie, Irish, and Rochberger teaches: The method of claim 28, the combination of Davie, Irish, and Rochberger do not expressly call for: PVC but teaches a plurality of VCs.

Chase teaches: PVC per Fig 2 or per col. 1 line 39-col. 2 line 31.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the PVCs or Chase to the method of the combination of Davie, Irish, and Rochberger in order to buld a network which utilizes static routes because it is a faster way of determining a VC from an IP address than utilizing a dynamic routing table which requires time to converge.

Referring to claim 30, the combination of Davie, Irish, Rochberger, and Chase teaches: The method of claim 29, the combination of Davie, Irish, and Rochberger do not expressly call for: wherein datagrams related to the same flow are transmitted on the same virtual circuit such that an end system need no re-sequence the data in the received datagrams but teaches routing packets over PVCs based upon the same destination address or flow per Fig2 2 or per col. 1 line 39-col. 2 line 31.

It would have been obvious to one of ordinary skill in the art at the time of the invention to that to add the datagrams routed based upon the same destination address or flow which would inherently not require to be resequenceed of Chase to the method of the combination of Davie, Irish, and Rochberger in order to build a network which utilizes static routes because it is a faster way of determining a VC from an IP address than utilizing a dynamic routing table which requires time to converge.

4. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davie (U.S. Patent No.: 6,320,845) in view of Irish (U.S. Patent No.: 6,757,281 B1) in view of Rochberger (U.S. Patent No.: 6,577,653 B1) further in view of Chase (U.S. Patent No.: 6,081,524) further in view of Sasyan (U.s. Patent No.: 6,804,247).

Referring to claim 26, the combination of Davie, Irish, Rochberger, and Chase teaches the first edge router of claim 24,

The combination of Davie, Irish, Rochberger, and Chase do not expressly call for: a forwarding table containing a plurality of route entries, and a forwarding block retrieves a router entry from said forwarding table using said destination address of a first IP datagram wherein said route entry indicates whether said IP route is to be used to trans port said first IP datagram, and wherein said VC determination block selects either said first one or of said plurality of virtual circuits or said another one of said plurality of virtual circuits based on said route entry.

Sasyan teaches: Figure 1 which has an IP address to VC lookup table or forwarding table and an inherent determination block

It would have been obvious ton one of ordinary skill in the art at the time of the invention to add the table and determination block of Sasyan to the router of the combination of Davie, Irish, Rochberger, and Chase in order to build a router which routes layer 3 packets across an ATM network.

***Claim Objections***

5. Claims 1-22 & 28-30 objected to because of the following informalities:

Claims 1, 10, & 18 are incomplete claims because they implies that layer 2 route is provisioned between the first edge router and the second edge router but never specifically say so. The examiner suggests the limitation be amended to "provisioning ... layer-2 network to said 2nd edge router, said ...". Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant's invention according to the specification is the ability to send a layer –3 packets encapsulated in to a layer 2 packet over different layer 2 route. In other words the layer-3 packet can be sent down a different layer 2 path or route in order to balance the load. This concept is lost in the wording of the independent claims 1, 10, 18, & 23.

Referring to claim s 1, 10, & 18; what is meant by the limitation ""with each datagram having a corresponding layer-3 route equal to said layer-3 route, wherein said subset of layer-3 datagrams are comprised in said plurality of layer-3 datagrams "? How can a subset of a plurality of datagrams still be a plurality of datagrams?

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert W Wilson
Examiner
Art Unit 2661

RWW
7/18/05

BOB PHUNKULH
PRIMARY EXAMINER